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The Iconography of the Elephant in the Middle Ages: Some Observations on its Anatomy in Visual Art

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Abstract

In the Middle Ages, elephants were represented in many art forms. They may have acted as a mere ornament or a geographical sign related to a specific part of the earth, for example in world maps, but they often refer to allegories explained in the *Physiologus*, bestiaries, and writings of the Church Fathers. The elephant is among the most extensively treated animals in bestiaries because of its enormous size and peculiar appearance and because of its consequently surprising gentle nature and intelligence. Elephants may have occupied a special position among wild beasts also because residual memories of them brought to Europe in the Hellenistic and Roman periods persisted.

The intention of this paper is to provide an analysis of how the elephant, which could not be observed directly, was represented in the Middle Ages up to the 13th century, and to investigate literary and iconographical sources for visual descriptions of its anatomy, namely its ears, trunk, tusks, limbs, skin, etc.

In the Roman period, realistic models of elephants abounded, and when the real appearance of the animal started to be forgotten, its body became a sort of patchwork of man's partial knowledge of the animal, just as the Indian story of six men and an elephant shows. When man depicts what he is not acquainted with, he tends to compensate the lack with what he knows. In the historical current in which wonders of the world started to be analyzed under the Scholastic system of knowledge, the elephant too started to be depicted fairly accurately, especially after Matthew Paris made a life sketch of the animal in 1255. However, even after that, the representation of the elephant depended much on the choice of the artist and art-work patron concerned.

The body of the elephant was a vehicle of allegory and symbol (religious, political, etc.), but at the same time, it reflects man's scientific observation and experience, thus showing two different human approaches to the world. Consideration of the representations of elephant anatomy would reveal a complex of crossing points among textual, visual and oral routes of transmission of information and ideas.

Abbreviations

C. U. F. : Collection des Universités de France, Paris «Les Belles Lettres»
P. L. : J.-P. Migne, Patrologiae Cursus Completus, series latina, Paris
L. C. L. : The Loeb Classical Library, Cambridge MA/London
C. C. S. L.: Corpus Christianorum Series Latina, Turnhout, Brepols
BL: British Library
BnF: Bibliothéque Nationale de France
C. C. C. C.: Corpus Christi College, Cambridge

Introduction

Though pachyderms have not existed in Europe since the extermination of the mammoth except for dwarf elephants,[2] elephants have often been represented visually from Antiquity in various media including coins and medals. In the Middle Ages, too, elephants were represented in many art forms such as manuscripts, sculptures, frescoes, mosaics, metal work, ivory work, textiles and so on. Sometimes they had merely ornamental functions, but in many cases, they refer to allegories explained in the *Physiologus*,[3] bestiaries and other sources.

In Holy Scripture, the elephant is mentioned only in the *First Book of the Maccabees*,[4] but in visual art, they are among the animals in the scene of 'the Creation of the animals', in that of 'Adam naming the animals'[5] and in 'Noah's Ark', as a good example of the variety of God's marvellous Creation. The elephant has its entry in the *Physiologus* and was mentioned by certain Church Fathers, thus establishing its solid position in Christian symbolism. Its visual representations, which declined after the era of late Antiquity, became again frequent in mosaics, sculptures and frescoes in churches from the 11th century. The reason for the abundant visual representation in the high Middle Ages[6] may be found in the vogue for secular romances such as the *Romance of Alexander* and allegorical animal lore, the making of bestiaries in Latin and then in the vulgar languages, the making of world maps (*mappae-mundi*)[7] and in part, also in real contact with the animal through the eastern worlds of Byzantium and Islam. Regions such as Southern Italy maintained strong ties with the Byzantine world, and their inhabitants may have seen the animal depicted in Byzantine and Islamic art and craft works such as chess pieces. In addition, from the 13th century, Western kings began to receive elephants as gifts along with other exotic animals from the caliphs and sultans of the East.

This article aims to analyse how this rare animal, difficult to observe directly in Europe, was represented in the Middle Ages up to the 13th century, and to investigate literary and iconographical sources for the visual descriptions of its physical characteristics, often not from nature, but compiled, following textual explanations or by artistic fantasy. Even when a visual representation of an elephant seems to be naturalistic, it was often a patchwork of partial knowledge of anatomical parts, and thus the African elephant's elements and those of the Asian elephant were often mixed up. Various books and articles in the art-history sphere have already been published which treat elephant iconography,[8] with some of them focusing on the Middle Ages.[9] Various media such as mosaics, sculptures, frescoes, ivory crafts, etc. will be taken into consideration in this article to furnish further detailed observations.

The elephant in ancient sources

First, we shall quote some passages on the elephant found in ancient writings which could have served as sources for the *Physiologus* and other later writings. In the ancient world, scientific knowledge of this animal owed much in particular to Aristotle (384- 322 BC),[10] who also corrected the erroneous statements of his precursors such as those of Ktesias (died 398 BC).[11] Here a limited number of select passages is extracted concerning the elephant's anatomy and its behaviour in procreation and parturition.

About its limbs

> The elephant does not behave as some used to allege, but settles down and bends its legs, though it cannot on account of its weight settle down on both sides simultaneously, but reclines either on the left or on the right, and in that posture goes to sleep. Its hind legs it bends just as a human being does.[12]

> ...but elephants... are so large and so heavy that their forefeet can serve only as supports; and indeed they are no good for anything else because they move so slowly and are quite unsuited for bending.[13]

About its generative organs

> The penis of the elephant resembles that of the horse, though it is disproportionately small for the animal's size; the testicles are not visible externally, being placed within near the kidneys, and for this reason the male quickly frees itself in intercourse.[14]

About its reproductive behaviour

> Elephants also copulate in unfrequented places, and particularly near rivers which they normally haunt...[15]

> The male will not have intercourse a second time until three years have passed, and never touches again a female it has once impregnated.[16]

Number of young

> ...the number of young produced at a time, one – another instance of a uniparous animal.[17]

The above statements could have had an influence on some legendary aspects of the elephant in the *Physiologus* (its lack of carnal desire, small number of offspring, parturition in water, etc.). However, Aristotle's observations on elephants' limbs were not reflected in the *Physiologus* where the author repeats the long-believed error that the elephant cannot bend because of the absence of knee joints.

In 280 BC, elephants were brought by Pyrrhus into the Italian Peninsula and then to Sicily. The Carthaginians learned about war elephants from battles against Pyrrhus in Sicily and they themselves brought their war elephants to battle against the Romans in Sicily. The Romans captured and brought many Carthaginian war elephants to Rome. However, the Romans did not make much use of elephants for warfare, and used them especially for spectacles, parades and ceremonies. The Emperor's triumphal chariot was often pulled by elephants, and thus the elephant continued to be a symbol of military power as they were also for the Hellenistic Diadochi. Greeks, Carthaginians and Romans minted various coins bearing elephant motifs which were in circulation in the Mediterranean region, another element which would acquaint the Romans with the shape of an elephant.[18] An example is a coin bearing a figure of an African elephant carrying Hamilkar, Hannibal's father, or Hannibal himself [fig. 1]. In some cities captured by Carthaginians especially in Etruria and Campania in Italy, Hannibal minted coins sporting a war elephant, usually accurately depicted.[19] Many other artefacts of those areas, such as plates and terracotta statues, bear elephant images.

The statement of Pliny the Elder (c. 23-79) on the elephant[20] are enriched by

fig. 1 Obverse: probable portrait of Hamilcar or Hannibal as Melkart-Hercles, Reverse: elephant with mahout, double shekel of New Carthage, Iberian Peninsula, 237-218 BC (Howard Hayes Scullard, *The Elephant in the Greek and Roman World*, Ithaca, Cornell University Press, 1974, plate XXI).

historical records on this animal brought to Italy, such as a cruel show between elephants and Gaetulians organized by Pompeius in an amphitheatre in 55 BC.[21] Using Aristotle and Pliny as his sources, Aelian added statements from other writers and his own details, especially on the nobility of the elephant. He mentions the elephant's severely moralistic attitude toward adultery (*On Animals*, 11. 15), its behaviour which resembles a cult connected with the moon goddess (4. 10), and its temperance in copulation (8. 17). He identifies the python as the enemy of the elephant several times (5. 48; 6. 21).[22] He also mentions the use of elephants in war (13. 9; 17. 29) and as guards (13. 22).

For the description of the elephant in the Greek *Physiologus*, a section from Basil (c. 330-379)'s *Homilies on Hexaemeron* (pre-379) is quoted almost in its entirety.[23] Basil wrote:

> Why has the elephant a trunk? This enormous creature, the greatest of terrestrial animals, created for the terror of those who meet it, is naturally huge and fleshy. If its neck was large and in proportion to its feet it would be difficult to direct, and would be of such an excessive weight that it would make it lean towards the earth. As it is, its head is attached to the spine of the back by short vertebrae and it has its trunk to take the place of a neck, and with it it picks up its food and draws up its drink. Its feet, without joints, like united columns, support the weight of its body. If it were supported on lax and flexible legs, its joints would constantly give way, equally incapable of supporting its weight, should it wish either to kneel or rise. But it has under the foot a little ankle joint which takes the place of the leg and knee joints whose mobility would never have resisted this enormous and swaying

> mass. Thus it had need of this nose which nearly touches its feet. Have you seen them in war marching at the head of the phalanx, like living towers, or breaking the enemies' battalions like mountains of flesh with their irresistible charge? If their lower parts were not in accordance with their size they would never have been able to hold their own. Now we are told that the elephant lives three hundred years and more, another reason for him to have solid and unjointed feet. But, as we have said, his trunk, which has the form and the flexibility of a serpent, takes its food from the earth and raises it up. Thus we are right in saying that it is impossible to find anything superfluous or wanting in creation. Well! God has subdued this monstrous animal to us to such a point that he understands the lessons and endures the blows we give him; a manifest proof that the Creator has submitted all to our rule, because we have been made in His image.[24]

The phrase such as 'nothing is superfluous in creation' is a sort of *topos* already used in Antiquity by Aristotle, Pliny and so on to praise marvellous creation by Nature and not by God.

What is notable here is the idea that men who are made in the image of God are allowed to take control of animals. The elephant is admired as one of the wonders of God's Creation, as if to emphasize men's superiority over the elephant and justify the taming and training of it.

Ambrose (c. 339-397), too, in the sixth volume of his *Hexaemeron* (386-390), dedicates much space to the elephant among other animals (6. 5. 30-35).[25] Ambrose also adds an account regarding the hunting of elephants: hunters cut away small sections of the trees on which elephants lean, so that they fall with the tree which cannot sustain their weight.

In the *Physiologus* the idea of man's dominion over animals is not seen. On the other hand, the story of the elephant that falls with the tree is transformed into a Christian allegory. The misunderstood idea that the elephant has no knee joint and cannot bend is a very important factor in the development of elephant allegory.

Some versions of the Latin *Physiologus* and many versions of the bestiaries quote Isidore (560- c. 636)'s statements. Isidore's description of the physiognomy of the elephant in his *Etymologiae* reads as follows:

> The Greeks believe that the elephant (*elephans*) derives its name from the size of its body, which looks like a mountain, for in Greek a mountain is called λοφος. Among the inhabitants of India an elephant is called a *barro* after the sound it makes, whence also its trumpeting is termed *barritus*, and its tusks called ivory (*ebur*). Its snout is called a trunk (*proboscis*) because with it the beast moves food to its mouth, and it is like a snake protected by an ivory palisade.
>
> These animals were called 'Lucanian cows' by the ancient Romans, 'cows' because they had seen no animal larger than a cow, and 'Lucanian' because it was in Lucania that Pyrrhus first set them against the Romans in battle. This kind of animal is suited to warfare, for the Persians and Indians, having set wooden towers on them, attack with javelins as if from a rampart. Elephants are very strong in intellect and memory. They proceed in herds; they give a greeting with a gesture, as they can; they flee from mice; they mate from the rear entry position; and when they give birth they deliver the offspring in water or on an island on account of serpents, because serpents are their enemies, and kill them by coiling around them. They carry the fetus for two years, never bearing more than once nor more than one; they live three hundred years. At first elephants were found only in Africa and India, but now only India produces them.[26]

Isidore based himself on Pliny and Solinus, but adds also the episode of the birth of the calf in water, as also found in the *Physiologus*.

Rabanus Maurus repeats almost to the letter those passages of Isidore, but he adds some allegorical interpretations at the end, as follows:

> 'Elephant' signifies a sinner, monstrous with crimes, and squalid from the deformity of his misdeed: nevertheless such people are often converted to Christ. Whence it is written in the book of Kings that apes and elephants[27] were led to Solomon, since "He is our peace, who hath made both one" (Eph 2.14), and with his blood he cleansed our conscience of works of the dead.[28]

The use of the words 'monstrosity' and 'deformity' for elephant anatomy is often seen in the context of battle, such as in Lucretius (c. 99- c. 55 BC) who called the

elephant 'hideous',[29] and Florus (c. 75-c. 130 AD) who referred to its 'ugliness and smell' and especially in Jewish literature. However, it seems these comments had no major echo in the later versions of the *Physiologus* or in any of the bestiaries. An exception is Aldhelm (c. 639-709)'s *Enigmata*. In Aldhelm, in his riddle on the elephant, the animal is described as a grim and ugly creature which will receive the glory of beauty only at his death when he leaves ivory as follows:

> Elephant
>
> A grim creature, I have learned to regard the roar of battle without fear: the iron-clad battle-lines and the throngs of densely-packed soldiers, the wretches whom the empty desire for fighting impels, as they seek to stain the holy laws of the realm with their weapons, and the battle-trumpet sucks in the air with windy blasts and the strident battle-horns resound with blazing rattle.
>
> Although the Creator made me ugly at birth when, issuing from the womb, I took on the gifts of life, nevertheless, the glory of my beauty follows upon my death, as the death-bringing terminus creeps into my open entrails: fine sheets of gold, precious with their burnished metal – even though they be adorned with the sparkle of jewels (and the) flourish of ornamentation – are never able to surpass me. Nature denied me the possibility of kneeling down when tired, or of giving my eyelids over to sleep on bended knee: what is more, I am compelled to spend my life standing up.[30]

If we consider the fact that, in the Middle Ages, people believed in the existence of many fantastic animals such as the unicorn, griffin, basilisk, etc., which were often depicted in scenes of God's Creation, among the animals named by Adam and in Noah's Ark, the elephant, very different from other animals and appearing almost improbable, especially because of its size, could be considered as one such monster testifying to the marvellous operations of God's Creation. But in the case of the elephant, it was mostly endowed with virtues rather than vices on the allegorical level.[31] The elephant sometimes stands for sinful man, but scarcely a devil or a demon, in contrast to other wild or fantastic animals such as the lion or unicorn, which have both benign and malign characteristics.

fig. 2 'ελεφαντας', Milan, Ambrosiana Library, Cod. E16 Sup. fol. 15r, 11th century (Xenia Muratova, 'L'arte longobarda e il «Physiologus»' in *Atti del 6° congersso internazionale di studi sull'alto medioevo*, vol. 2, Spoleto, Centro italiano di studi sull'alto medioevo, 1980, Tav. 6).

Representation of the elephant in medieval art

In addition to the elephant's most distinguished feature, namely its 'large size like a mountain' or the statement that 'the elephant is the biggest among animals', the physical nature of the elephant described in the *Physiologus* and bestiaries is, more or less composed of the above-mentioned statements, which are sometimes added or omitted. If manuscript illustrators who had never seen an elephant had to represent it without a real animal in front of them, it is only to be expected that strange details came to be invented because of ignorance and misinterpretation. The elephant in the Greek *Physiologus* in the Ambrosiana Library in Milan is an appealing but a very different animal from a real elephant **[fig. 2]**. A similar tapir-like animal is seen also in some bestiary manuscripts such as the one in the Bodleian Library in Oxford[32] (MS Laud Misc. 247, fol. 163v) **[fig. 3]**. Artists who worked on church decoration may have referred to some visual model or may have obtained information in written texts (or possibly by oral transmission?) from the iconographic programme makers.

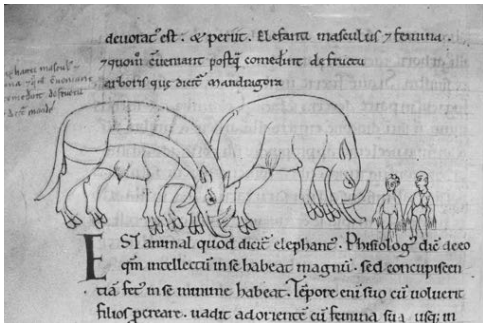


fig. 3 '*elephantus*', Oxford Bodleian Library, MS Laud Misc. 247, fol. 163v, 1110-1130 (© Bodleian Libraries, University of Oxford).

Realistic representation

From the Early Christian period, when it was rather easy to learn about the natural shape of an elephant from ancient mosaics or sculptures, carvings on sarcophagi etc., we have examples of realistic elephants. Up to the 13th century, the only living elephants documented as having come to Europe were an Indian one presented to Charlemagne from Harun al-Rashid,[33] the famous caliph of the *Thousand and One Nights*, another donated to the Holy Roman Emperor Frederick II by the Egyptian Sultan in 1229, and one presented by the Egyptian Sultan to Louis IX of France in 1254.

The elephant given to Charlemagne[34] and named Abul Abbas, landed at Porto Venere near the modern La Spezia in 801 and arrived at Charlemagne's court in 802 or 803 where it lived until 810,[35] but no visual record seems to have been made of it,[36] except for one small illustration which we will consider soon. Among the silk textiles with elephant motifs which have survived to our day from the 10th century is one Byzantine product conserved in Aachen Cathedral.[37] It is said that Otto III opened Charlemagne's tomb and used it to wrap his bones. Silk textiles from the Orient were conserved among treasures by nobles and by churches, and were often used to wrap saints' relics. Some manuscripts which belonged to the Frankish kings have decorative illustrations of elephants, for example as the *Evangiles de Lothair*, and the *First Bible of Charles the Bald*, but none of them are naturalistic.[38] They may have had a model in Oriental textiles. The only naturalistic depiction of an elephant extant from this period is found in a manuscript of Cassiodorus **[fig. 4]**, where an initial letter has an Indian elephant's head as an ornament. The manuscript is believed to have been produced in Saint-Denis, in a scriptorium of Charlemagne, and thus the artist may have seen Abul-Abbas.

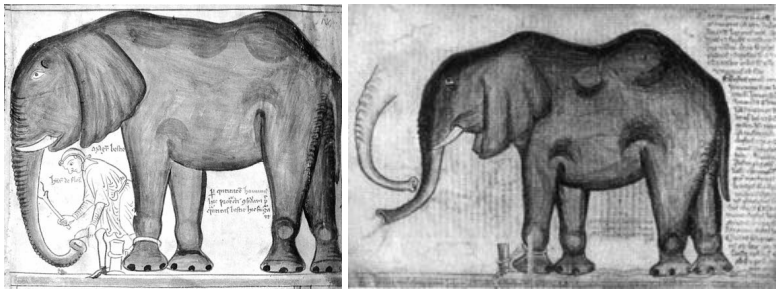


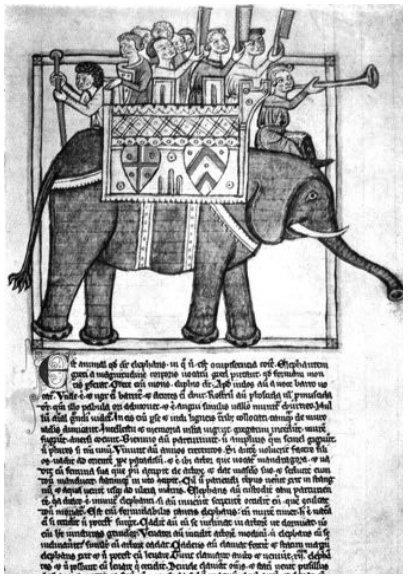
fig. 4 (above) An initial with an elephant head, Cassiodorus, *Expositio Psalmorum*, BnF, Latin 2195, fol. 65r, early 9th century (Marie-Pierre Laffitte, Charlotte Denoël, *Trésors carolingiens. Livres manuscrits de Charlemagne à Charles le Chauve*, BnF, 2007).
fig. 5 (below-left) '*elephans*', C. C. C. C. MS 16 (Matthew Paris, *Chronica majora*), fol. ivr, c. 1255-1258 (Wikimedia Commons, PD-Old).
fig. 6 (below-right) '*Figura elephantis invecti in Angliam*', BL, Cotton Nero D. I (*Liber additamentorum*), fol. 169v, 1255 (BL Online Gallery, CC0 1.0).

As for the elephant presented to King Louis IX, it is known that he almost immediately handed it over to his brother-in-law Henry III of England. The African elephant, probably taken in the first half of 1255 from Paris to London, was depicted from nature by Matthew Paris, a Benedictine monk and chronicler. Matthew made two sketches. One is now in C. C. C. C. MS 16, fol. ivr **[fig. 5]**. Another is on fol. 169v in the *Liber additamentorum* (BL, Cotton Nero D. I.) **[fig. 6]**. In the former, the elephant is depicted with his keeper who is holding a knotted club in his hand and bending down to feed it. The caption states his name as being '*Henricus de Flor* (Henry of Florence)'.[39] The other caption states that the size of the beast can be measured from the height of the man.[40] The latter sketch, more accurate in detail, is considered to be an earlier work, which might have been used

fig. 7 *'Elephas Cremonensis'*, C. C. C. C. MS 16 (*Chronica majora*), fol. 151v, 1235-1259 (Wikimedia Commons CC0 1.0).

as a preparatory sketch for the former.[41] It does not have a keeper, but has an addition in the form of a partial sketch of the trunk in another pose, the caption to which reads, *Figura elephantis invecti in Angliam*. The two depictions of the elephant by Matthew Paris show naturalistic earlobes, trunks and tusks emerging correctly from the upper jaw. They also depict knee joints in low positions, thus reflecting anatomical reality. Passages regarding the arrival of the elephant in 1255 in the *Chronica majora* is short,[42] but Matthew adds a separate gloss to accompany the illustration now inserted at the beginning of C. C. C. C. MS 16. After some observations on the elephant (it is ten years old, ten feet high, and greyish-black, and has no hair but a very hard, rough hide, etc.) he adds passages from the Bible, Bernard Silvestris, Virgil, Horace and the medieval bestiaries.[43]

Matthew Paris also mentions the elephant of Frederick II in another part of the *Chronica majora*, in the context of the visit of Frederick's brother-in-law Richard of Cornwall to Cremona in 1241.[44] Richard was welcomed by a procession led by an elephant, all at the command of Frederick II. Frederick's elephant was Indian, and he employed the elephant in his victory parades. The presence of the animal is recorded in the Cremona city annals in 1237.[45] Matthew made an illustration of the Cremona elephant in the *Chronica majora*, with a caption reading *Elephas Cremonensis procedens obviam comiti Ricardo iussu domini imperatoris Fretherici*.[46] It is not as realistic as Henry III's elephant sketched by Matthew Paris himself, but it has tusks almost in the right position even though they seem to come from the lower jaw **[fig. 7]**. A sketch of a live elephant may be distinguished by its having two descending tusks, with slight ascending curve only at the tip,



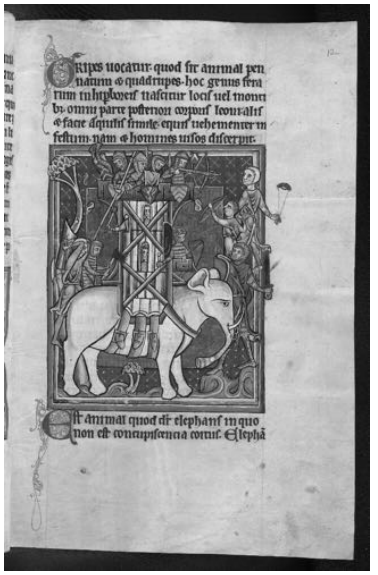


fig. 8 (left) Elephant with a howdah, BL, Harley 3244, fol. 39r, between 1236 and 1250 (BL Online Gallery, CC0 1.0).
fig. 9 (right) *'elephantus'*, Oxford Bodleian Library, Bodley 764, fol. 12r, 1185 (© Bodleian Libraries, University of Oxford).

while almost all representations not from life show the tusks rising upward.

So, Matthew's Cremona beast is not so far removed from reality. The elephant's trunk is accompanied by the caption *promoscida* and its trunk is correctly represented with two nostrils. BL, Harley MS 3244, fol. 39 dated between 1236 and 1250 **[fig. 8]** is almost a mirror image of the Cremona elephant, but the elephant there has a trunk similar to a tube with one nostril hole.[47] On the other hand, its tusks come correctly from the upper jaw.

The man on the neck of Matthew's Cremona elephant with a bell and a sickle-like hooked stick with which he controls the elephant is designated *Magister Bestiae*. There is another man with a pointed stick on the elephant's rear, acting as a goader. Matthew's description of this animal in the chronicle runs:

> On his approaching Cremona, the Cremonese gladly came to meet him, preceded by the emperor's elephant, handsomely decorated and wearing a wooden fortress in which the masters of the beast sat, playing trumpets and merrily applauding by clapping their hands.[48]

fig. 10 (left) Trani Cathedral, façade, c. 1180 (Photo by author).
fig. 11 (right) Elephant as column supporter, Church of San Giacomo, Trani, c. 1143 (Photo by author).

The details such as the *Magister Bestiae* and the goader are probably the products of Matthew's imagination built upon information about the events he had received from some who had witnessed it. We cannot be certain, though, whether the elephant was also guided from the rear, for in the East the elephant is usually guided by a mahout sitting on its neck. The figure of the goader on the rear might have been inspired by that of a soldier with a javelin in combat from the tower on the elephant's back often depicted in the illustrations in bestiary manuscripts, such as MS Bodley 764, fol. 12r **[fig. 9]**. Cattle are usually driven by a cattle prod or a goad, and the image of goading cattle from the rear may have been easily transferred to the elephant. We may conclude at this point that a visual representation of an elephant could be a patchwork of textual information, travellers' reports, visual models and artists' imaginations.

Debra Hassig points out that even in England some manuscripts dating from before 1255 depict naturalistic images of elephants, as for example, an elephant in the *Vatican Bestiary* compiled between 1200 and 1210, more than 40 years before 1255, the year when a living elephant arrived in London.[49] Hassig concludes that the degree of naturalism was a matter of artistic choice guided by cultural ideas and not evidence of direct observation.[50] Actually, Matthew Paris could depict an elephant rather naturalistically before he had seen a real one in 1255.

A 12th century elephant sculpture on the façade of the cathedral at Trani in Apulia, Southern Italy, looks very realistic with the exception of shorter tusks **[fig. 10]**. Similar elephants are found as supports for columns of the portal of the church of San Giacomo in Trani **[fig. 11]**. The people of Southern Italy could have had occasion to see real elephants or at least realistic representations of the elephant due to contact with the Byzantine Empire or the Islamic world.[51] In Byzantium, memories of Classical art were perpetuated to a much more marked degree.[52] Elephants were kept in the zoological gardens in Byzantine courts, and used in games at least until the 13th century,[53] and artists could sketch them. We may consider some realistic depictions of an elephant in Byzantine or Arabic herbals and medical books as eventual models. Southern Italy was a frequent point of contact with the Arabic and Byzantine world and thus the city of Salerno became one of the centres of medical science. Constantine the African, who lived in Salerno in the 11th century, translated from Arabic to Latin various works on medicine. Matthaeus Platearius, a physician in Salerno wrote *Circa instans* (*The Book of Simple Medicines*) in the 12th century which includes *spodium*, burnt ivory.[54]

A parenthetical remark is needed here for the history of chess pieces. The game of chess originated in India and was introduced in Europe through Persia and Arabic countries in about the 11th century.[55] Originally the game of chess reflected four parts of an Indian army: cavalry, chariots, elephants, and infantry. The so-called chess set of Charlemagne now in the Louvre, in reality, was made in about the 11th century probably at Salerno, one of the centres of ivory carving at that time. Even as late as in 1283, the Spanish King Alfonso X commissioned a chess set with the *aufin* piece in the shape of an elephant with a howdah,[56] and King Edward I is known to have possessed *aufin* pieces in ivory, and in crystal and jasper,[57] but in the 13th century the now familiar bishop piece replaced the elephant piece. Such elephant chess pieces could well have circulated in southern regions of Italy and have served as a model for larger elephant carvings.[58]

Representation of anatomic parts of the elephant

We pass on now to examine some representative patterns regarding aspects of the anatomy.

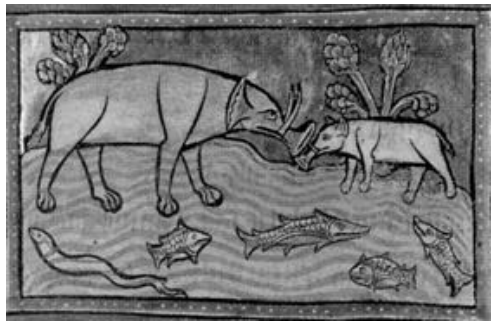


fig. 12 (left) '*De bestiis*', Montecassino Library, cod. Casin 132 (Rabanus Maurus, *De rerum naturis*), p. 191, 11th century (Guglielmo Cavallo, *L'Universo medievale. Il manoscritto cassinese del De rerum naturis di Rabano Mauro*, Ivrea, Priuli & Verlucca, 1996, p. 19).
fig. 13 (above) Female elephant and an elephant calf in water, BL, MS Royal 12 F xiii, fol. 13v, 1230-1240 (BL Online Gallery, CC0 1.0).

Earlobes

Strangely enough, no text seems to discuss the form of the ears except that of Arethaeus of Cappadocia (1st century). He explains the shape of the earlobe, the point to which other writers did not pay attention, including Aristotle. Explaining that the short neck which is not very conspicuous, Aretaeus continues as follows:

> For the ears are large, broad, resembling wings, extending to the collar-bone and breast-bone, so as to conceal the neck with the ears, like ships with their sails.[59]

Aristotle himself spoke about the animals' ears only from the view point of their function and their place on the head. As there is little statement on the form of the earlobe, it is rather to be expected that earlobes were represented in a very different way from reality. Some have dog- or horse-like ears, some have almost no earlobes. On the exterior wall of the Baptistery of Parma Cathedral, there is an elephant with small round earlobes in a medallion design. The illustrator of a famous 11th century manuscript of Rabanus Maurus, *De rerum naturis*, in Montecassino, gives a trumpet-like form both to an elephant's earlobes and to its short trunk **[fig. 12]**. The earlobes are just like a widely open trumpet or the flower of the morning glory as also in the BL, MS Royal 12 F xiii fol. 13v from the 13th century **[fig. 13]**.

fig. 14 Adam naming animals in Paradise, National Library of Russia, Lat. , Q. v. V. 1, fol. 5r (*Saint Petersburg Bestiary*), late 12th century (M. Pastoureau, *Bestiaires du moyen âge*. Paris, Seuil, 2011. p. 22).

A frilled fan-like type of earlobe characterizes a series of English Latin manuscripts. The elephant in BL, Royal 12 C xix, fol. 63v, one in the *Saint Petersburg Bestiary* (National Library of Russia, Lat. Q. v. V. 1, fol. 5r) **[fig. 14]**, and that in the *Worksop Bestiary* (New York Morgan Library, MS M81) for example share not only a similar type of earlobe but also a similar trunk to which we will return later, suggesting that these manuscripts could have a common model or could be related to each other.[60]

Legs and feet

As already stated, many writers before and after Aristotle stated that elephants have no joints in their legs.[61] Even if Aristotle corrected this error (*Part of Animals*, 659a; *History of Animals*, 498a), the idea continued to be accepted and persisted for a long time. Many texts stated that the elephant had a long trunk because he was too big and could not bend his joint-less legs. In the *Physiologus*, the female elephant is described as giving birth to her offspring in water for fear of falling, as she would not be able to get up again.[62] The *Physiologus* continues with other episodes deriving from the elephant's joint-less limbs, e.g. elephants leaning asleep against trees, as they cannot lie down for repose. To catch an elephant, hunters partially sever a tree on which the elephant usually leans to sleep, and when the elephant rests against the tree, it falls with the tree. The elephant cries out and so a

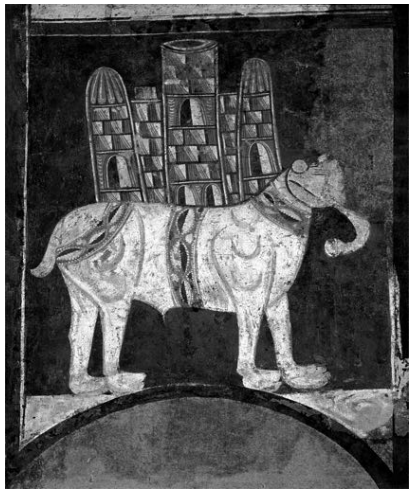


fig. 15 Elephant and castle, from San Baudelio de Berlanga, fresco, Museo del Prado, 1120-1130 (Wikimedia Commons, CC0 1.0).

greater elephant comes, but he cannot help the fallen one to rise. Then both cry and twelve elephants come to help, but without success, and finally a small elephant arrives and helps the fallen elephant to get up. According to Druce, this mistaken notion about the elephant's leg is based on the fact that their knee-joints are much lower down than in other animals and that the African elephant has in actuality a habit of standing to sleep.[63] In bestiary manuscripts, the scene of the birth of an elephant calf in water is more often illustrated than the rescue of a fallen elephant, probably because of the difficulty of the depiction of such a complex narrative scene.[64] A few examples of the latter scene depicted in manuscripts are in the oldest surviving illustrated example of bestiary, i.e. the Latin *Physiologus of Bern* (*Physiologus Bernensis*) (2nd quarter of 9th century), and in BL, MS Royal 12 F xiii **[fig. 13]**. We will see later that the fallen elephant is represented with a tree, both in sculptures and in manuscripts. Some illustrations contradict the belief that elephants have no joints and show them bending the knees of their forelegs, as we will see later.

The thickness of elephant limbs was not understood very well either, even though Ambrose and others described them as being made in one section like columns.[65] Another misunderstanding about the elephant's legs is the number and shape of the toes.[66] There are many examples of elephants with hooves (single or cloven) like a horse or an ox. Sometimes they have paws **[fig. 15]**. The elephant really has hooves, but they look attached and are not so evident as those of an ox or sheep. Albertus Magnus (1206-1280), who revived the tradition of Aristotelian scientific observation, wrote:

> Elephants' legs are large, having about the same size below as above, like columns. And while their foot is divided into many parts, nature nevertheless joined the toes together in order to strengthen the foot in this manner. This is why they are said not to have joints in their legs beyond the knees. Perhaps they have rigid, not loose joints and are therefore thought not to have any by the inexperienced, for if they had not joints, they would not be able to have an orderly walk.[67]

Even after Albertus Magnus, the legs and feet of the elephant were not represented realistically. The number and shapes of hooves or toes differs widely.

Aristotle and Pliny rightly state that the elephant's hind legs bend in the same way as human legs,[68] but no correctly observed visual example is seen of this way of bending the hind legs. Exceptionally the artist of the elephant in the *Vatican Bestiary* depicted the kneecaps at the front of the four legs.

Trunk and tusks

As for the form and nature of the elephant's special trunk, most writers from Aristotle, Pliny and the *Hexaemeron* praise it as a marvellous work of Nature.

Guillaume le Clerc wrote his *Bestiaire divin* in about 1210 in which he describes the elephant as follows:

> When it arrives in a meadow, it puts out from its mouth a bowel with the aid of which it can eat in the prairie. Otherwise, it could not reach the ground, without bending. If it kneeled, it could never get up alone.[69]

Pierre le Picard (Pierre de Beauvais) (13th century) also says that the elephant has a bowel in front of it with which he eats.[70]

I found some examples of elephants with a tube-like feature coming out of its mouth. One at Saint-Restitut in Drôme **[fig. 16]**, and one in Sainte-Engrâce in the

fig. 16 (left) Saint-Restitut, Drôme, frieze on exterior northern side, 12th century (© Jean-Claude Vinourt).
fig. 17 (right) Man and woman in embrace: elephant, Abbey of Sainte-Engrâce, capital on south apsidiole, late 12th century (Marcel Dusliat, *Pirénées romanes*, La Pierre-qui-vire, Zodiaque, 1969, plate 144).

Pyrenean region **[fig. 17]** each in France. However these examples are dated prior to the work of Guillaume le Clerc and Pierre le Picard.[71] We need to investigate texts written prior to those. Pliny says:

> They [elephants] eat with the mouth but they breathe and drink and smell with the organ not unsuitably called their hand.[72]

Here, the trunk is called a 'hand'. Already Lucretius associates the hand-like trunk with a serpent as follows:

> ...as in the race of quadrupeds we see especially snake-handed elephants, which in their many thousands provide an ivory palisade about India, so that none may penetrate within.[73]

> Next the Lucanian oxen with turreted backs, hideous creatures, snake-handed, were taught by the Carthaginians to endure the wounds of war, and to confound the great hosts of Mars.[74]

Cassiodorus (c. 485-c. 585) discourses as follows, in the letter to Honorius, prefect of Rome, which he wrote in the name of King Theodahad:

> It uses its proboscis, that nosëd hand which Nature has given it to compensate for its very short neck, for the benefit of its master, accepting the presents which will be profitable to him.[75]

Alexander Neckam (1157-1217) owes much to Cassiodorus and Solinus in writing about the elephant in his *De naturis rerum* (c. 1180). When he explains the elephant's trunk, he almost copies letter for letter the above comment from Cassiodorus.

Cassiodorus' 'nosëd hand (*nasuta manos*)' can be translated both as 'refined hand' and as 'acute hand', but also as 'nasal hand', an idea shared with Pliny. Albertus Magnus writes as follows:

> It has a trunk ten cubits in length, which it uses in place of a hand for battle, feeding, and other tasks.[76]

As we have seen, the notion that the elephant has a trunk which he uses as a hand seems to be common in Antiquity and in the time of Cassiodorus. An example in Saint-Benoît-sur-Loire (a capital in the choir carved in about 1180) showing a strange animal throwing out a long human hand-like projection from its mouth, can be identified with an elephant. If it represented an elephant, it could have been inspired directly from ancient sources[77] as well as from a text written before Guillaume le Clerc which has not survived to the present, or from oral tradition.

A very curious way of depicting the trunk is seen in the *Ripoll Bible* where scenes from the *First Book of the Maccabees* are shown. The *Ripoll Bible* now in Biblioteca Apostolica Vaticana (Lat. 5729), was produced in the scriptorium of the monastery of Santa Maria in Ripoll, Catalonia in about 1015-20. This Bible has richly coloured illustrations. On folio 342r is the scene of the battle between the Maccabees' cavalry and Antiochus IV's troops with elephant cavalry **[fig. 18]**. There are three elephants carrying a high pagoda-like tower topped with an Oriental roof with soldiers inside. Two of the elephants are yellow, the one under which Eleazar went in is coloured green. They have an ox's body and small round earlobes. What is striking is the trunk, which is something like two tubes attached side by side and bent like a crook. This type of trunk is found only in this manu-

fig. 18(left) Eleazar under the elephant of Antiochus IV, Biblioteca Apostolica Vaticana, vat. Lat. 5729 (*Ripoll Bible*), fol. 342r, c. 1015-20 (Sketch by author).
fig. 19(right) '*DE NATURIS SERPENTARUM. DRACO MAJOR…*', Morgan Library, MS M81 (*Worksop Bestiary*), fol. 78r, pre-1187 (Janetta Rebold Benton, *The Medieval Menagerie. Animals in the Art of the Middle Ages*, New York, Abbeville Press, 1992, p.78).

script so far as I know.

In Aretaeus' account of the elephant trunk, he describes the shape as follows:

> And the upper jaw from its lip has a long, ex-osseous, crooked and serpent-like protuberance; and there are two perforations at the extremity of this protuberance; and these by nature are perforated all the way to the lungs, so as to form a double tube, so that the animal uses this pipe as a nostril for respiration, and likewise as a hand.[78]

Aretaeus' description of 'crooked' and 'double tube' suits perfectly to the representation of the elephant trunk in the Vatican manuscript. The illustrator may have been able to refer to some document preserved in Ripoll monastery containing Aretaeus' account or Oppianos' *Cynegetica* where the elephant's trunk is described as a 'great nose, thin and crooked'.[79]

Lucretius' comparison of the trunk with a snake, which was taken by Basil and Ambrose, may explain the form of the trunk as found in a series of English manuscripts. The three manuscripts containing an illustration of an elephant with a common frilled earlobe mentioned above, also share the same trunk shape. Their trunks have a pointed swelling at the tip with two nostrils that point upward, just like a serpent raising its head[80] **[figs. 14, 19]**.

On the other hand, the trunk is sometimes depicted as just a little longer than

fig. 20(left) South Lopham church, poppy head, 16th century (G. C. Druce, 'The Elephant in medieval legend and art', *Journal of the Royal Archaeological Institute* 76, 1919, plate XII no. 2).
fig. 21(right) Dragon and elephant, Oxford St. John's College, MS 61, fol. 6r, 13-14th century (G. C. Druce, 'The Elephant in medieval legend and art', *Journal of the Royal Archaeological Institute* 76, 1919, plate V no. 2).

the snout of pig or a wild boar. We have already mentioned elephants with short trunks looking like a tapir in the *Physiologus* in the Ambrosiana Library, Milan **[fig. 2]** and in the Bodleian Library, Oxford **[fig. 3]**. Some French stone carving and English wood sculptures show an elephant with a duck-like bill. A pair of elephants on one corner of a capital in Vorly (Cher, France), lay their foreheads together, also because their bills are tied together with a rope. According to Marc Thibout, the rope is a misinterpretation of the tusks.[81] Elephants on much later poppy-heads in Denston church (Suffolk) and on that of South Lopham church (Norfolk) **[fig. 20]** have bill-like snouts.[82] The bill of the second one is marked with rings which form folds. English manuscripts also show beak-like trunks. The elephant struggling with a dragon in MS 61, St. John's College, Oxford, has a curved beak and cloven feet, but no tusks **[fig. 21]**.[83] The reason for elephants having a bill or a beak, and also a shorter pig-like snout may be sought in the influence of the Latin word *rostrum* meaning a beak or snout. It is used by Isidore and Rabanus Maurus who declare, 'the elephant's snout is called a proboscis'.[84]

As we have already seen in regard to Matthew Paris' sketch, many medieval visual representations of the elephant have tusks inaccurately rising upwards, which could be in imitation of well-known animals such as wild boars. It could also be influenced by the writings of Isidore, Rabanus and certain other bestiaries which mention an elephant's trunk as being like 'a snake, protected by a rampart

(or palisade) of ivory (*et est angui similis, vallo munitus eburno*)'.[85] Surely that the metaphor of a palisade or rampart might have easily suggested the image of an ascending tusk.

Elephant skin

Not many carvings or reliefs maintain their original colours, but pictures in mosaics, frescoes and many manuscripts reveal the original colouring which testifies that elephants could be depicted in various vivid colours, such as the blue in the Montecassino *De rerum naturis* manuscript, red in the scene of Noah's Ark in *Facundus Beatus* (Madrid, Biblioteca Nacional, MS Vitrina 14-2, fol. 109) and pink and various tints in English Bestiary manuscripts. *Letter of Alexander to Aristotle* (*Epistola Alexandri ad Aristotelem Magistrum suum de situ et mirabilibus Indiae*) compiled in Latin in the 7th century narrates that Alexander the Great saw many elephants, white, black, red and spotted.[86] In the section on the elephant, the *Liber monstrorum* quotes Alexander's comment.[87] According to Jacqueline Leclercq-Marx, medieval artists felt much freer in choosing colours for an animal's skin.[88] They prioritised the effect of colour or symbolic intention of colour and that could compromise a naturalistic rendering.[89] In the case of the elephant, in about the period of Matthew Paris (and Albertus Magnus), more representations of grey elephants can be seen,[90] though vivid colouring continued even after that until the Renaissance.

Aristotle writes of its hair, declaring that it is the thinnest among the quadrupeds,[91] but not about its skin or its colouring. Albertus Magnus describes the characteristics of elephant skin as 'dark almost pumice-coloured…, that is mangy and is something into which flies fall. It kills these by drawing its skin into wrinkles'.[92] This belief, seemingly inappropriate in view of Albertus' scientific mind, is found in Pliny where he states:

> The hide of the back is extremely hard, but that of the belly is soft; it has no covering of bristles, not even on the tail as a guard for driving away the annoyance of flies for even that huge bulk is sensitive to this but the skin is creased, and is inviting to this kind of creature owing to its smell: consequently they stretch the creases open and let the swarms get in, and crush them to death by suddenly contracting the creases into wrinkles. This serves them instead of tail, mane and fleece.[93]

Albertus Magnus' use of the word 'mangy'could have been influenced by other authors' statements on the disease elephantiasis. Lucretius for example states: 'There is the elephant disease which is found by the river Nile in mid-Egypt and nowhere else'.[94]

Pliny also refers to elephantiasis:

> I have said that elephantiasis did not occur in Italy before the time of Pompeius Magnus, and that though the plague usually begins on the face, a kind of freckle on the tip of the nose, yet presently the skin dries up over the body, covered with spots of various colours, and uneven, in places thick, in others thin, in others hard as with rough itch scab, finally however going black, and pressing the flesh on to the bones, while the toes and fingers swell up. This plague is native to Egypt.[95]

Different from what is now termed elephantiasis (the disease caused by filaria), elephantiasis usually meant leprosy in ancient Greece and Rome.

Cassiodorus on the configuration of elephant skin, explains that it is furrowed by deep channels, like that of the victims of the foreign disease named after it (i.e. elephantiasis).[96] Then he continues that it is on account of the impenetrability of this skin that the Persian Kings used the elephant in war.[97]

Thus, the notion of the elephant's hard and rough hide with its wrinkles or channels was well known among classical authors, in connection with leprosy. In the representations of the elephant in the Roman period, where all other features of its anatomy is satisfactorily realistic, we see many examples of the surface of the skin depicted by means of a lattice pattern, a device to render its creased tactility. This 'unrealistic but effective'[98] device is seen in carvings, reliefs and in mosaics in the Roman period. During the Middle Ages, however, this pattern seems to have been forgotten, and instead, the wrinkles are sometimes rendered by rather regular and geometric patterns with short parallel or concentric lines,[99] especially on the trunk **[fig. 22]**.

Some polka-dotted elephants are seen especially in the Beatus manuscripts.[100] Several of those manuscripts show, in the scenes of Noah's Ark, an elephant polka-

fig. 22 Bishop's throne, Canosa Cathedral, 1079-89 (Photo by author).

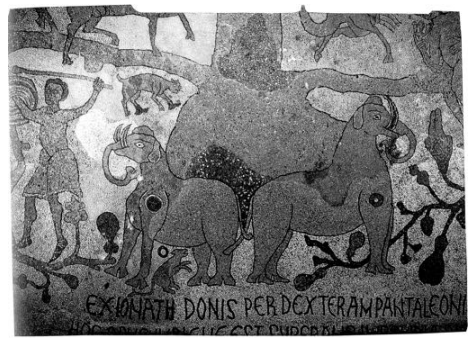


fig. 23 Two elephants supporting a tree, Otranto Cathedral, floor mosaic, 1163-1165 (M. Sellar, *Elephant*, Cologne, Könemann, 1998, p. 243).

dotted or with small dots in rows. Some felines are commonly depicted with dots to represent their being panthers or leopards, but what do dots mean on an elephant's skin? Can we interpret that as a medieval device for rendering the cragginess or roughness of the skin, especially if we consider that it was associated with leprosy?

We see also some elephants with figural patterns on their skin. In Otranto Cathedral the entire floor is covered with a mosaic depicting a great 'tree of life' or a 'tree of the world' inhabited by many animals and monsters,[101] and scenes from Bible, fables and romances. The tree is supported by two elephants, that on the right bigger than that on the left, standing back to back. The usual interpretation of the scene is that it represents Adam and Eve standing by the tree of knowledge,[102] also because on the top of the tree are the figures of Adam and Eve. The *Physiologus*, the Church Fathers and bestiaries state that elephants are animals reluctant to mate and that when they want to reproduce they approach Paradise to find a mandrake tree, the fruit of which induces desire. Whether the back-to-back pose alludes to elephant coitus is not certain,[103] but when two elephants are represented in textiles, on capitals and so on, most cases are represented face-to-face, and thus the Otranto case is unusual.[104]

The two elephants here have a circle or concentric circles on their shoulders **[fig. 23]**. In one of the medallions encircling the images of the above-mentioned Adam and Eve, King Solomon, a siren, and so on, another elephant has a similar circular motif at its foreleg joint and a star motif near the hip. The polka-dot motif may be indicative of the elephant's hard and wrinkled hide, as was the lattice pattern in the Roman period, but on this point, we can speculate on the influence of Islamic art.

In Apulia the elephants figuring as supports for the Bishops' throne (*cathedra*) **[fig. 22]** and as architectural elements such as column-supporters (*stylophori*) may be inspired by Islamic art works.[105] Another *cathedra* with elephant supports is found at the cathedral of Calvi Vecchia near Capua. The depiction of the elephants of two *cathedrae* are very different **[fig. 24]**, but the two regions were both dominated by Norman rulers who seemed to have been particularly fond of the elephant.[106] An Islamic ivory work which represents an elephant with a mahout and a trumpeter on its back shows the elephant's body adorned with a damask-like saddlecloth and anklets **[fig. 25]**. The elephant also has two arabesque decorations at its shoulder and thigh. Furthermore, the elephants on the Canosa *cathedra* bear arabesque ornaments at the same points of the body. If the wrinkles of the elephant here are represented by simple lines, the arabesque-like decoration could represent the painting of the elephant's body since we can see a beautifully painted elephant in parades on festal occasions in India and other countries, even to the present. Anna Contadini states that in Arabic manuscripts on animals, such as *Kitāb na't al-hayawān* (*Book of the Characteristics of Animals*) elephants are always depicted as domesticated animal: they wear a cap, saddlecloth, bell and anklets.[107] But, considering the fact that another ivory plaque also conserved in the Walters Art Museum (probably of the same provenance) with the running figures of a

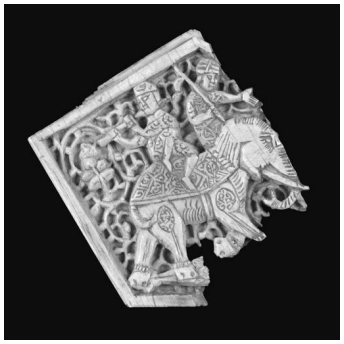


fig. 24 (left) Bishop's throne, Calvi Vecchia, end of 11th century (Photo by author).
fig. 25 (right) Plaque with elephant, mahout, trumpeter, ivory, 11-12th century, Egypt, The Walters Art Museum (Walters Art Museum, Creative Commons License CC0).

man and a dog presents the same kinds of motif on the dog's shoulder and hip, it may not be a representation of painting on the elephant's body, but merely a conventional way of representing animal limbs in Islamic art. Since we see dots and lines on the body of a camel, another exotic animal from the Orient depicted in the *Beatus* of Urgell, we may presume that the dots on the elephants are also influenced by Islamic art.

Elephantine dimensions

We now turn to deal with the dimensions of the elephant. Even when they are represented rather realistically, their huge size is not always respected. It depends of course on the space provided, but the African elephants used in martial operations were of a smaller and tamed North African type which may have been a similar species to the present-day African forest elephant. Megasthenes (c. 350-c. 290 BC) insisted that Indian elephants were bigger than Lybian elephants. Pliny states:

> African elephants are afraid of an Indian Elephant, and do not dare to look at it, as Indian elephants are indeed of a larger size.[108]

African forest elephants (2-3 meters high) are in actuality even smaller than Indian elephants (3-4 meters high).[109] Pliny distinguishes another kind of African elephant as follows:

fig. 26 Adam naming the animals in Paradise, ivory, Florence, National Museum of Bargello, c. 400 (Photo by author).

> Ethiopia produces elephants that rival those of India, being 20 cubits.[110]

The elephant mentioned here might be *Loxodonta africana*, but here we should consider 20 cubits as the length and not the height as usually translated.

The reason why the elephant was not represented as large as it really was may be due to ignorance of reality, but it could also be because the memory of the smaller North African elephant persisted, or because of the statements comparing the elephant to the ox. Lucretius twice denotes elephants as Lucanian oxen (*De rerum natura*, 5. v. 1303-1304, 1339). Pliny states the Romans gave it that name (8. 6. 16). The notion continued through Isidore and Rabanus.[111] They may have had an impression of an animal just bigger than an ox.

Another reason can be found in the conception of man's superiority over animals. Some representations of 'Adam naming animals' show Adam being much bigger than other animals **[fig. 26]**, as a mark of his dominion over animals.

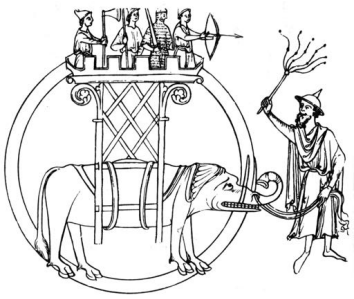


fig. 27 *'elephans'*, Cambridge, University Library, MS. Ii. 4. 26, (*Cambridge Bestiary*), fol. 7, 1200-1210 (T. H. White (tr. and ed.), *The Book of Beasts*, New York, Dover Publications, 1984, p. 24).

Elephants represented like oxen

The elephant's alias 'Lucanian ox' may have influenced such writers as Philippe de Thaün who explained the anatomy of the elephant as being similar to that of the ox:

> And Isidore describing the elephant writes, 'it is excessively big and it has the form of an ox'.[112]

As such, there are many visual representations of elephants similar to oxen, despite there being no mention of elephants' having ears, snouts or hooves like oxen. There is another physical feature of the medieval elephant that may prove that it was represented in imitation of an ox: a projection on the underside of an elephant. This feature is not found on a real elephant's abdomen, but it is on that of an ox in connection with the male genitalia. Artists who never saw a real elephant and entertaining a notion that they were like a great ox, may have added the feature from the observation of cattle. Elephants with an ox-like protuberance on their belly can be seen in frescoes and mosaics, as in a fresco from San Baudelio de Berlanga **[fig. 15]**, those of Ganagobie and the Oxford Bodleian Library, MS Laud Misc. 247, fol. 163v **[fig. 3]**.

A fresco deriving from the church of Sant Joan de Boí, now in the National Museum of Catalan Art in Barcelona, executed around 1100, shows a figure accompanied by an inscription reading *OLIFAN*. It is depicted as an animal with two horns just like a cow. The part where the trunk should be is now lost and we

fig. 28 Elephant with platform on its back, Abbey of Trinity, Caen, 1062-1130 (© Rémy Cordonnier).

do not know what the former part of the head of this animal was like, but the artist who did not know what an elephant looked like tried to depict it as an ox and gave it two head horns.

In addition, the elephant figures linked by means of a chain or a cord seen from the 13th century onward might be inspired by such images of cattle. In the *Ashmole Bestiary*, the chain is attached to the tip of the trunk, and in the *Cambridge Bestiary* (Cambridge University Library, MS Ii. 4. 26) **[fig. 27]**, Bodleian Library MS Bodley 764, fol. 12r **[fig. 9]** and in BL, MS Harley 4571, fol. 8, the cord is attached to two holes made midway down the trunk just as in the nostrils of cattle. On a capital in the Abbey of the Trinity in Caen, a curious long-bodied elephant's short trunk is tied to a rope, the other end of which is grasped by a mahout who is on a platform on its back **[fig. 28]**.

The elephant subdued by Man

In the 13th century, the elephant was depicted sometimes whipped or threatened by a club or a rod. The elephant tied by a rope and about to be whipped by a Jew in the *Cambridge Bestiary*, is certainly connected to the trend of anti-Semitism which intensified from the end of the 12th century as Debra Hassig points out.[113] In the *Cambridge Bestiary*, the elephant figures as a Christian or a Christian Church, and the wickedness of the Jew is stressed. On the other hand Jacque de Vitry (1170-1240) compared Jewish heroes of the *First Book of the Maccabees* to Christian soldiers, namely Templars. In *Speculum humanae salvationis*, which be-

came popular in the 14th century, the story of Eleazar became a symbol of victory over paganism. Thus, the elephant came to be considered the enemy of Christ, and the elephant dies with the self-sacrificing death of Eleazar, the figure of Christ himself. We see that the elephant, too, came to bear contradictory symbolism such as the lion and unicorn. Here, however, we might also find a change in human attitudes to animals. We have seen in Basil and Ambrose the justification of human rule over animals. The elephant was an example of an animal that can be trained with a rod. From the 12th century, the episode of Adam's naming of the animals started to be included in bestiaries as one chapter. In a bestiary of the second family version the chapter titled *Omnibus animantibus Adam* explains several words concerning animals, where the difference between wild beasts and domestic animals is stressed. Herd animals serve men as food and are suited to be used by man as beasts of burden and work. Domestic animal (*pecora*) is used only as the animal that is eaten. The conception of Paradise before original sin as a place where all beasts coexist in peace without eating each other (*Isaiah* 11: 6-9) is found no more. The hegemony of men over animals that are destined to be eaten is clear. A Jewish philosopher Philo of Alexandria (20/30? BC -40/50? AD) already claimed man's dominion over animal and interpreted the Old Testament in this key.[114] According to Philo, animals lack reason and are inferior to human beings, and thus are more similar to plants than to humans, and all things are made to serve humankind. This anthropocentric view of the cosmos was adopted by Christians.[115]

A marginal illustration in a manuscript of *De animalibus* of Albertus Magnus (BnF, Latin 16169, fol. 280r, 14th century) shows an elephant kneeling in front of a king.[116] With the revival of the memory of ancient writers, bestiaries began to include a passage from Pliny through to Isidore, which tell that the elephant can even kneel in front of kings, as in the bestiaries of Philippe de Thaün and Guillaume le Clerc. Here, the elephant is tied with a cord by a man who is going to beat its hip with a club **[fig. 29]**. The writers of this period started to report again that the elephant could kneel in front of a king to pay a courtesy, maybe because the elephants were in fact presented to kings and princes from the 13th century. But this kneeling elephant may show an attitude of men to animals in general if we compare it with another illustration of the ape above in the initial letter D.

fig. 29 Elephant in front of a king, Initial D with a monkey, BnF Latin 16169 (Albertus Magnus, *De animalibus*), fol. 280, 14th century (Gallica © BnF).

There is a similar man with a club keeping an ape tied with a cord. The elephant and the ape may have been chosen here as they were the two most important exotic animals in the menageries of princes[117] (after all, ivory and apes were exotic luxuries from the time of Solomon). However, we might see in the rather violent behaviour of the man with the club towards the elephant: the idea of human dominion over the animal world seems firmly established. We wonder, incidentally, if the club depicted with the elephant keeper Henricus de Flor **[fig. 5]** was really witnessed by Matthew Paris. An Oriental mahout usually has an *ankus* (a pole with a hook) as seen in Matthew's illustration of the Cremona elephant (even if the mahout there seems to be a Westerner) **[fig. 8]**. Florentine Henry may have substituted it with a club as he did not have the Oriental tool. Yet, it may have been added as a mere symbol of dominion over a beast by the animal keeper, just as Heracles raised it against the Nemean lion.

Violence perpetrated on animals might allude furthermore to a tension between Jews and Christians, as is seen in the *Cambridge Bestiary*, or between Orient and Occident, as the elephant had been a symbol of conquest of the Orient by Alexander the Great and the Diadochi. In many versions of the Alexander romances, Alexander considers Indians like wild beasts, inferior in intelligence to the Greeks and thus easily subordinated by the latter. We already see here a theory justifying colonialism, claiming the lack of intellect, in parallel with man's dominion over the animal world.

Conclusion

Just as we marvel at animals' peculiar bodies and habits reported in documentary films, ancient writers too wondered about how Nature skilfully created animals and their parts. The elephant in particular was one of the most marvellous animals for its size, strength, intelligence and for its trunk which works in sophisticated ways as a hand. Thus, it became one of the favourite symbols and allegories in Christian contexts, too. The body of the elephant was a vehicle for allegories, symbols and at the same time, reflected men's scientific observations and experience.

Hitherto, we have tried to identify texts and other sources which have created some erroneous representations of elephants. The absence of discourse on some parts of the anatomy such as the ears may have also caused misunderstandings. The elephant's popularity in bestiaries may be due to the fact that it was brought to Europe in Classical times and there were continuing residues of memory which people could manipulate either by means of fantasy or scientific observations of other animals.

From the second half of the 13th century, more interest began to be invested in depicting a thing as it resembled nature, and some elephants were depicted naturalistically in historical contexts, but many of them continued to bear fantastic colours and anatomic details. Even in the period when the resemblance to reality was not yet the first priority, artists tried to compile an elephant's body, patchworking their partial knowledge of anatomy and details also from Islamic and Byzantine models. Artists who had never seen elephants probably made use of some visual examples of manuscript illustrations and other art forms or *carnets* of models. In those cases too, details could be elaborated from the imagination. When they had no visual model before them, they may have heard by word of mouth what the animal looked like, and misinterpretations could have resulted. There might have been possibilities of misinterpretation of texts by the programme makers themselves.

Images in sculptures, frescoes and mosaics are made up at the complicated crossing points of textual, visual and oral traditions, and thus their direct sources are not at all easy to uncover. Beneath the changes in representation of the elephant surely lies cultural change, but therein may lie also changes in relationships between men and animals, namely man and nature. The elephant was one of the most marvellous things in God's Creation, and at the same time a symbol of 'Otherness', an object of the Orientalist gaze of the Western world. The depiction and treatment of the elephant was (and continues to be) an example of anthropocentrism.

Notes:

1. This article is a part of the Ph.D. dissertation 'Elephant in Antiquity and the Middle Ages' presented to Université Libre de Bruxelles in 2017. The idea for this article first came from my presentation on the occasion of the 19th Colloquium of the International Reynard Society (21-24 September 2011 held in Aix-en-Provence), which adopted the theme of 'The animal body in literature and images' as one of two main themes. I am most appreciative of the organizers, Professor Jacqueline Leclercq-Marx who provided me with the occasion and of those who passed invaluable comments. Acknowledgements are also addressed to Professor A. P. Jenkins and Professor Christopher Melley for extensive help and comments.
2. During the climate and tectonic upheavals of the ice age, a branch of much smaller sized proboscideans developed. They lived in particular on Mediterranean islands such as Malta, Crete, Cyprus, Sardinia and Sicily. The last of the dwarf elephants lived about 4,000 years ago.
3. *Physiologus*, a collection of descriptions and allegories of animals, birds, stones and plants, was written in Greek by an unknown author in Alexandria. Its compilation has been traditionally dated to the end of the 2nd century or beginning of the 3rd century AD. The Latin translation may have appeared in the 4th century. About the date, the author, the sources, etc. of the *Physiologus*, see Michael J. Curley (tr.), *Physiologus. A Medieval Book of Nature Lore*, University of Chicago Press, 2009, pp. iv-xxvi.

4. 1 *Maccabees* 6: 28-47. On the other hand, ivory is often mentioned as a symbol of luxury and represented the vice of extravagance, but it is also a symbol of purity and of fortitude. 1 *Kings* 10: 18, 20, 22, 39, and 2 *Chronicles* 9: 17, 21, etc.
5. The scene of Orpheus playing a lyre surrounded by animals is said to have inspired scenes of 'the Creation of the animals' and 'Adam naming the animals'. Scenes of Orpheus depicted in Antiquity until the 6th century sometimes include elephants.
6. Marc Thibout states that the elephant disappears in the Gothic period, at least in stone sculpture, M. Thibout, 'L'éléphant dans la sculpture romane française', *Bulletin Monumental*, 150, 1947, pp. 181-95. Also, the use of representational mosaics, especially for floors, became less frequent in the Gothic period. Thus, elephant images in Gothic art are seen prevalently in manuscripts.
7. In world maps, monsters and monstrous races, and exotic animals cited by Greek and Roman writers were first depicted in a row in a marginal part of the world, but then started to be located in some particular places where they were believed to live. The elephant was associated with such places as Ethiopia and India. Hugh of Saint Victor (c.1096-1141) places it in Ethiopia (*Descriptio mappe mundi*, 447), while on the Hereford map the elephant is situated in India. Naomi Reed Kline states that the text accompanying the maps is grounded in the classical rather than the Christian world while iconography can be influenced by bestiaries. N. Reed Kline, *Maps of Medieval Thought: The Hereford Paradigm*, Woodbridge, Boydell Press, 2001, p. 100. However, in the fragment of the floor mosaic in the Cathedral of Aosta dating from the beginning of the 13th century, the elephant is depicted near a personification of the River Euphrates. Richard de Fournival (1201-1259 or '60) in his *Bestiaire d'Amours* (1252?) asserts that the female elephant delivers her young in the waters of the Euphrates, a river in India. *si ke quant la femelle de l'olifant doit enfanter, si va enfanter dedens l'aigue d'Eufraite, ki est uns flueves d'Inde la superior*. (ed. Lugiana Morini, *Bestiari medievali*, Torino, Giulio Einaudi editore, 1996, p. 414).
8. Frederick C. Sillar and Ruth M. Meyler, *Elephants Ancient and Modern*, New York, Viking Press, 1968. As for the elephant in Antiquity, Jocelyn M. C. Toynbee, *Animals in Roman Life and Art*, Barnsley South Yorkshire, Pen and Sword, 2013; Martin Saller, *Elephants. A Cultural and Natural History*, Cologne, Könemann, 1998.
9. George C. Druce treats illustrations in manuscripts in particular. G. C. Druce, 'The Elephant in Medieval Legend and Art', *Journal of the Royal Archaeological Institute*, 76, 1919, pp. 1-73; On the elephants in French Romanesque sculpture, M. Thibout, 'L'éléphant dans la sculpture romane française'; Debra Hassig, *Medieval Bestiaries*, Cambridge University Press, 1995, especially chapter 12 'The Ideal Spouse: The Elephant', pp. 129-44; Francis Klingender, *Animals in Art and Thought to the End of the Middle Ages*, Cambridge MA, M. I. T. Press, 1971; Charles Avery, 'The Elephant in Italian Sculpture –Romanesque to Renaissance' in *La scultura meridionale in età moderna nei suoi rapporti con la circolazione mediterranea* (ed. Letizia Gaeta), Galatina, Mario Congedo Editore, 2007, pp. 297-311, treats some medieval examples in Southern Italy; Nona C. Flores, 'The Mirror of Nature Distorted. The Medieval artist's Dilemma in Depicting Animals', in *The Medieval World of Nature. A Book of Essays*, (ed. Joyce E. Salisbury), New York, Garland, 1993, pp. 3-45, which treats an aesthetic change of the mid-13th century and gives a rough overview of the visual representation of the elephant though lacking examples from the 11th and 12th centuries.
10. Aristotle in his *Part of Animals* and *History of Animals*, among other animals, describes at greater length and in more detail the lion, the elephant, the crocodile, the seal (sea leopard), the lizard and the camel. Almost all the elephants he explains are Indian, even though he must also have known about the African type.
11. Ktesias mentions elephants several times in *Indica* and *Persica* but his statements are based on what he heard (sometimes mere rumours), reflecting oral traditions in Persia, Egypt and elsewhere, and are thus not considered to be totally reliable. Indeed, Aristotle and Aelian among others sometimes object to his statements.
12. Aristotle, *The History of Animals*, 498a (tr. A. L. Peck, *L. C. L.*, I, 1965, p. 79).
13. Aristotle, *Parts of Animals*, 659a (trs. A. L. Peck, E. S. Forster, *L.C.L.*, 1961, p. 195).
14. Aristotle, *The History of Animals*, 500b (tr. A. L. Peck, *L. C .L.*, I, 1965, p. 93).
15. Aristotle, *The History of Animals*, 540a (tr. A. L. Peck, *L. C. L.*, II, 1970, p. 105).
16. Aristotle, *The History of Animals*, 546b (tr. A. L. Peck, *L. C. L.*, II, 1970, p. 145); the same content occurs in *The History of Animals*, 630b.
17. Aristotle, *The History of Animals*, 546b (tr. A. L. Peck, *L. C. L.*, II, 1970, p. 145).
18. The most famous coin representing an Indian elephant was minted by Alexander the Great to commemorate his victory over the Indian king Porus in 326 BC. The Diadochi too, minted many coins bearing an elephant especially in Indo-Greek territories. The war elephant was a symbol of their dominion over Eastern countries. Personifications of African or Indian cities and countries often wear headgear taking the shape of the skin of an elephant's head (*exuviae elephantis*).
19. But they often show characteristics of both African and Asian elephants. The designers of these coins may have known both species and conflated their characteristics. J. M. C. Toynbee, *Animals in Roman Life and Art*, p. 36.
20. Pliny too furnishes a detailed description of the elephant along with the lion, the dog and the bee in his *Natural History*. He also mentions ivory (8. 4. 7) and states that it is a very precious material demanded by luxury-minded Romans (37. 78. 204).
21. Pliny, *Natural History*, 8. 7. 19-21. Pliny mentions elephants used in war and those with turrets on their shoulders too (8. 9. 27; 11. 1. 4).
22. Aelian tells also of a combat between the rhinoceros and the elephant (*On Animals*, 7. 44), a rare description which may have become the origin of stories of clashes between the unicorn and the elephant in medieval bestiaries. Isidore and Rabanus Maurus state that the rhinoceros and the monoceros are the same thing, and that the monoceros often fights with the elephant wounding it in the belly with the horn, Isidore, *Etymologiae*, 12. 2. 12; Rabanus Maurus, *De rerum naturis* (*De universo*), 22. 8. 1.
23. Arnaud Zucker (tr.), *Physiologos. Le bestiaire des bestiaires*, Grenoble, Editions Jérôme Millon, 2004, p. 236.
24. Basil, *Homilies on Hexaemeron*, 9. The creation of terrestrial animals, 5 (tr. Bl. Jackson,

https://www.elpenor.org/basil/hexaemeron.asp?pg=78).

25. Ambrose respected Basil, his contemporary and studied his works. Thus he owes much to Basil in writing his work both in its construction and particular examples. Hiroyuki Ogino, 'Ambrosius Mediolanensis, Exameron', in *Corpus fontium mentis medii aevi*, VI: *Early Latin Fathers*, Tokyo, Heibonsha, 1999, p. 541. According to Florence McCulloch, '...in describing the fifth and sixth days of creation in his *Hexaemeron*, he [Ambrose] used material similar to that of the *Physiologus* if not this work itself…. In any case, towards the end of the fourth century there are definite parallel passages in the *Physiologus* and the *Hexaemeron* of Ambrose, in the *Hexaemeron* wrongly attributed to Eustathius of Antioch and in the writings of Epiphanius, to cite only the best known'. F. McCulloch, *Mediaeval Latin and French Bestiaries*, Chapel Hill, The University of North Carolina Press, 1960, p. 20.
26. Isidore, *Etymologiae*, 12. 2. 14-16 (trs. Stephen A. Barney, W. J. Lewis, J. A. Beach, and Oliver Berghof, *The Etymologies of Isidore of Seville*, Cambridge, Cambridge University Press, 2006, p. 252). We corrected the translation of the phrase '*aversi coeunt*' to 'they mate from the rear'. See *infra*, note 103.
27. Rabanus Maurus here reads 'elephants', for what is really 'ivory'. 'Every three years his fleet would return, bringing gold, silver, ivory, apes, and monkeys', 1 *Kings* 10: 22. In the *Vulgate* it is *dentis elephanti*. G. C. Druce, 'The Elephant in Medieval Legend and Art', p. 30, note 48.
28. Rabanus Maurus, *De rerum naturis*, 22. 8. 1 (tr. Priscilla Throop, *Hrabanus Maurus, De universo. The Peculiar Properties of Words and their Mystical Significance*, I, Charlotte VT, Medieval MS, 2009, p. 238).
29. *taetras*, Lucretius, *De rerum natura*, 5. v. 1302.
30. Aldhelm, *Enigmata*, 96 (trs. Michael Lapidge and James L. Rosier, *Aldhelm, The Poetic Works*, Cambridge, Boydell & Brewer, 1985, p. 91)
31. There is much to say on the allegory and symbolism of the elephant, which became still richer from the 13th century when it came to stand for Mary, Ecclesia, etc. which I discussed partially in 'The Elephant in the Middle Ages: allegory and symbolism', *Bulletin of Okinawa Prefectural University of Arts*, 23, 2015, pp. 1-20. (『西洋中世における象の寓意と象徴』『沖縄県立芸術大学紀要』23)
32. Curiously enough, those strange beasts resemble the elephant's ancestors which the people of the Middle Ages could not have known.
33. According to P. E. Dutton, Charlemagne imagined Aachen as an earthly Paradise and himself as a new Adam, and that is also the reason why he wanted an elephant in his menagerie, being the animal particularly related to Paradise. P. E. Dutton, *Charlemagne's Mustache. And Other Cultural Clusters of a Dark Age*, New York, Palgrave Macmillan, 2004, pp. 55-59. On the other hand, for Jacques Voisenet, it was because Charlemagne wanted his court to be possessed of the prestige enjoyed by Roman emperors. J. Voisenet, *Bêtes et hommes dans le monde médiéval: Le bestiaire des clercs du Ve au XXe siècle*, Turnhout, Brepols, 2000, p. 54, note 3.
34. The record on Abul Abbas is in *Annales regni Francorum* (which covers the period 741-829, written c. 788-829?), which relates that a certain Isaac, a Jew sent by Charlemagne to Persia four years earlier, arrived with the ambassadors of the Persian King Aaron at Porto Venere bringing an elephant from Harun al-Rashid, *Annales regni Francorum*, 801, www.thelatinlibrary.com/annalesregnifrancorum; Eginhard, *Vie de Charlemagne* (ed. and tr. Louis Halphen), *C. U. F.*, 1947, pp. 48-49. Eginhard (775- 840) states that it was the only elephant that Harun al-Rashid had, an assertion which is now considered doubtful. Alessandro Barbero, *Charlemagne. Father of a Continent*, Berkeley, University of California Press, 2004, p. 100; P. E. Dutton, *Charlemagne's Mustache*, p. 60. On the other hand, Michel Pastoureau states that at the beginning there were two elephants, and only the bigger one survived the journey to Italy, and that they were of African origin, M. Pastoureau, *Bestiaires du moyen âge*, Paris, Editions de Seuil, 2011, p. 84.
35. It died in Denmark when Charlemagne was at war. His menagerie was mobile and he took the elephant with him to many of the places to which he went, Eginhard, *Vie de Charlemagne*, pp. 48-49; *Annales regni Francorum*, 810.
36. According to Lawrence Nees, the earliest illustration of Isaac driving the elephant is from a 14th century Catalan manuscripts (BnF, cod. esp. 30), Lawrence Nees, 'Charlemagne's Elephant', *Quintana* 5, 2006, p. 24, note 23, p. 37.
37. *Rhin-Meuse. Art et civilisation 800-1400*, Cologne/Bruxelles, 1972, p. 173.
38. The reverse side of the so-called Areobindus diptych bears a representation of Paradise with Adam and Eve at the top and an elephant at the bottom, where the elephant has naturalistic features, except for its small size. It is said to have been produced around the first decade of the 9th century and was used as a Carolingian book cover. It is supposed either to be Carolingian produced possibly at Tours, or a Byzantine production. P. E. Dutton, *Charlemagne's Mustache*, p. 59.
39. Suzanne Lewes, *The Art of Matthew Paris in the Chronica majora*, Berkeley, University of California Press, 1987, p. 214.
40. *per quintitatem hominis his protracti considerari potest quantitas bestie hic figurate*, S. Lewes, *The Art of Matthew Paris in the Chronica majora*, p. 214.
41. Daniel Lecoq, 'Les marges de la terre habitée' in *Iconographie. Etudes sur les rapports entre textes et images dans l'Occident médieval* (ed. Gaston Duchet-Suchaux), Paris, Léopard d'Or, 2001, p. 145. S. Lewes, *The Art of Matthew Paris*, pp. 212-15. As for the elephants drawn by Matthew Paris, see also Jean A. Givens, *Observation and Image-Making in Gothic Art*, Cambridge University Press, 2005, pp. 37-81; N. C. Flores, 'The Mirror of Nature Distorted. The Medieval Artist's Dilemma in Depicting Animals', pp. 33-38.
42. *Tempore quoque sub eodem, missus est in Angliam quidam elephas, quem dominus rex Franciae pro magno munere dedit domino regi Anglorum. Nec credimus quod unquam aliquis elephas visus est in Anglia, immo nec etiam in partibus cisalpinis, praeter illum; unde confluebant populi ad tantae spectaculum novitatis*, (ed. Henry R. Luard, *Matthaei Parisiensis, Monachi sancti Albani, Chronica Majora*, V, London, Her Majesty's Stationery Office, 1883, p. 489).
43. S. Lewis, *The Art of Matthew Paris*, pp. 213-14.
44. *Appropinquanti autem Cremonam veniebant obviam gaudenter Cremonenses, elephantem*

imperatoris mirabiliter ornatum producentes, et portantem machinae ligneae propugnaculum, in quo quidam magistri bestiae residebant, tubis canentes, et manibus joculando applaudentes, (ed. Henry R. Luard, *Matthaei Parisiensis, Monachi sancti Albani, Chronica Majora,* IV, London, Her Majesty's Stationery Office, 1883, p. 167).

45. On Frederick II's menagerie see, Martina Giese, 'Die tierhaltun am Hof Kaiser Friedrichs II. zwischen Tradition und Innovation', in *Herrschaftisräume, Herrschafts- praxis und Komunikation zur Zeit Kaiser Friedrichs II*, Münich, Herbert Utsz, 2008, pp. 121-71. Thierry Buquet, 'La belle captive: la girafe dans les ménageries princières au Moyen Âge', in *La bête captive au Moyen Âge et à l'époque moderne* (*Actes des deuxièmes rencontres internationales «Des bêtes et des hommes» Valenciennes, 8-9 novembre 2007*), Amiens, Encrage université, 2012, pp. 65-90, see especially pp. 76-77.
46. S. Lewis, *The Art of Matthew Paris*, p. 281.
47. Another difference is the shape of the elephant's tail, which may reveal that the artist of Harley MS 3244 had not seen a real elephant. Hassig points out also that the mahout on the elephant's haunches with a pick driving it in the *Chronica majora* is a European, but in the Harley MS he is Sub-Saharan African with reddish skin. D. Hassig, 'The Ideal Spouse', p. 141.
48. S. Lewis, *The Art of Matthew Paris*, p. 281. For the Latin text, see *supra* note 44.
49. D. Hassig, 'The Ideal Spouse', pp. 141-142. The *Vatican Bestiary* in Biblioteca Apostolica Vaticana (MS Reg. Lat. 258) is considered to have been made in the North Midlands of England.
50. D. Hassig, 'The Ideal Spouse', p. 142.
51. Not only in Southern Italy but also in areas along the Adriatic coast of the Italian peninsula, we find many representations of elephants especially in mosaics and some in sculpture, even if not all of them are naturalistic. This may be caused by the close relationships between the Adriatic cities themselves and the Byzantine world.
52. Mireille Mentré, 'L'iconographie des bibles romanes catalanes. Quelques observations', *Les cahiers de Saint-Michel du Cuxa* 21, 1990, pp. 101-08, note 29.
53. Eric Baratay and Elizabeth Hardouin-Fugier, *Zoo. A History of Zoological Gardens in the West*, London, Reaktion Books, 2002, p. 19.
54. As for the medical use of animals in the Middle Ages, see Sophie Glansdorff, 'Animaux et Médecine', in *Fabuleuses histoires des bêtes et des hommes* (dir. Jacques Toussaint), Namur, TreM.a, 2013, pp. 123-39.
55. For the history of chess, see Harold J. R. Murray, *A History of Chess*, London, Oxford University Press, 1913; Henry A. Davidson, *A Short History of Chess*, New York, David Mckay, 1981; Hans und Siegfried Wichmann, *Schach. Ursprung Und Wandlung Der Spielfigur in 12 Jahrhunderten*, München, Georg D. W. Callway, 1960.
56. H. J. R. Murray, *A History of Chess*, pp. 568-69, 769; Lilian M. C. Randall, 'An Elephant in the Litany: Further Thoughts on an English Book of Hours in the Walters Art Gallery (W.102)', in *Beasts and Birds of the Middle Ages. The Bestiary and Its Legacy* (eds. Willene B. Clark and Meradith T. McMunn), University of Pennsylvania Press, 1990. p. 122, note 34.

57. H. J. R. Murray, *A History of Chess*, p. 449.
58. I have discussed the development of chess pieces in the West and its influence on the visual representation of the elephant in 'Elephant in Antiquity and the Middle Ages', pp. 216-21, 284-87.
59. Aretaeus, *On the causes and symptoms of the Chronic Diseases*, 2. 13 (ed. and tr. Francis Adams, in *The Extant Works of Aretaeus, the Cappadocian*, London, Sydenham Society, 1856, p. 366).
60. Xénia Muratova has examined the iconographical relationship between the *Saint Petersburg Bestiary* and the *Worksop Bestiary*, and identifies them as 'brother manuscripts (*les manuscrits-frères*)'. X. Muratova, 'Les manuscrits-frères: un aspect particulier de la production des Besitiaires enluminés en Angleterre à la fin du XIIe siècle'. in Xavier Barral i Altet (ed.), *Artisans et production artistique au Moyen Age*, Paris, Picard, 1990, pp. 69-92.
61. Strabo too states that 'its legs have a continuous, unbending bone', Strabo, *Geography*, 16. 4. 10 (tr. H. L. Jones, *L. C. L.*, VII, 1983, p. 325).
62. Only the Y version includes this episode in the Greek *Physiologus*.
63. G. C. Druce, 'The Elephant', p. 29.
64. However, those depicting the very moment of delivery are few, there being one in the BnF MS 14969, fol. 118v.
65. *…quia rigidioribus opus fuit cruribus, quo velut columnis*. Ambrose, *Hexaemeron*, 6. 5. 31 (*P. L*. 14, 1882, col. 269).
66. The toenails have developed into small hooves. The number of hoof nails are four on front foot, and three on the hind foot in the African savannah elephant; five on the front foot, and four on the hind foot in the African forest elephant, and five on the front foot, and four on the hind foot in the Indian elephant.
67. Albertus Magnus, *On Animals*, 22. 1. 37 (trs. and annotated Kenneth F. Kitchell Jr. and Irven M. Resnick, Baltimore, Johns Hopkins University Press, 1999 p. 1476). *Crura autem sunt magna et inferius et superius fere aequalis magnitudinis sicut columnae: et licet in multa dividat pedem, tamen natura coniunxit digitos ut ex hoc pes fortificetur: et hac de causa etiam flexuras post genua in cruribus dicuntur non habere: et forte habet flexuras non laxas, sed strictas: et ideo putatur non habere ab imperitis: quia si nullas haberet flexaras, non posset habere gressum ordinatum.* (ed. Hermann Stadler, Münster, Aschendor, 1920, p. 1376).
68. Aristotle, *History of Animals*, 498a; Pliny, *Natural History*, 11. 101. 248.
69. Guillaume le Clerc, *Bestiaire divin*, XXXV De Olifant *Quant il vient el pestiz erbu, Hor de sa boche ist un boel, O quei il pest par le prael. Autrement n'ateindreit il pas, Sanz sei agenollier, si bas; Et se agenollos esteit, Ja par sei ne relevereit*. (ed. Célestin Hippeau, Caen, *Le Bestiaire divin de Guillaume le Clerc de Normandie*, A. Hardel, 1852, p. 291).
70. Pierre le Picard, *Bestiaire*, LX. *Ceste beste porte .I. boel par devant, don't il mangüe.* (ed. Craig Baker, *Le Bestiaire, version longue attribuée à Pierre de Beauvais*, Paris, Honoré Champion, 2010, p. 222).
71. Pierre le Picard's bestiaries are dated from before 1206. The sculptures are presumed to be

carved in about the following periods. Saint-Restitut: 12th century, Abbey of Saint-Benoît-sur-Loire: c. 1180, Abbey of Sainte-Engrâce: late 12th century.

72. Pliny, *Natural History*, 8. 10. 29. *mandunt ore, spirant et bibunt ordoranturque haud inproprie appellata manu* (tr. H. Rackham, *L. C. L.*, III, 1983, p. 22).
73. Lucretius, *De rerum natura*, 2. v. 536-538 (trs. W. H. D. Rouse and M. F. Smith, *L. C. L.*, 1924, p. 136). *sicut quadripedum cum primis esse videmus in genere anguimanus elephantos, India quorum milibis e multis vallo munitur eburno, ut penitus nequeat penetrati.*
74. Lucretius, *De rerum natura*, 5. v. 1302-1304 (trs. W. H. D. Rouse and M. F. Smith, *L. C. L.*, 1924, p. 478). *inde boves lucas turrito corpore, taetras, anguimanus, belli docuerunt volnera Poeni sufferre et magnas Martis turbare catervas*.
75. Cassiodorus, *Variae*, 10. 30. 4 (tr. Thomas Hodgkin, *Letters of Cassiodorus*, London, Henry Frowde, 1886, p. 442). *In vicem manus promuscidem tendit et magistro profutura gratanter accipit, quia se ipsius cura vivere posse cognoscit. est enim, ut ita dixerim, praedictae beluae nasuta manus, per quam data suscipit et ori suo voranda transmittit* (ed. A. J. Fridh, *Magni aurelii Cassiodori. Variarum libri XII*, *C. C. S. L*. 96, 1973, p. 413).
76. Albertus Magnus, *On Animals*, 20. 37 (trs. K. F. Kitchell Jr. and I. M. Resnick, *On Animals. A Medieval Summa Zoologica*, vol. I, Baltimore/London, Johns Hopkins University Press, 1999, p. 1476).
77. There is of course a possibility that the notion was diffused orally and inspired both the sculptors of the capitals, and the writers of bestiaries and scientific writings such as Guillaume and Albertus, or it is possible that there used to be written sources which no longer survive.
78. Aretaeus, *On the Causes and Symptoms of the Chronic Diseases*, 2. 13 (ed. and tr. Francis Adams, *The Extant Works of Aretaeus, the Cappadocian*, London, Sydenham Society, 1856, p. 367).
79. Anscar M. Mundó recognized five main illustrators in the *Roda Bible*, *Ripoll Bible* and other scattered fragments but all working in the same scriptorium more or less contemporaneously. If so, such a difference of rendering the elephant's trunk in two manuscripts looks strange. But if the hypothesis that the *Roda Bible* was destined from the beginning to be conserved in the library of the monastery of Sant Pere de Rodes and some part of text and illustration was completed there, even if the greater part was executed in Ripoll, it is possible that the scene of the Maccabees too is illustrated in the *Roda Bible* with other models. *The Art of Medieval Spain. A.D. 500-1200*, New York, Metropolitan Museum of Art, 1993, p. 308.
80. At the tip of the trunk of an Indian elephant, there is one (an African elephant has two) finger-like protuberance, a prehensile 'finger', which with two nostrils as eyes may resemble a snake's head, but without close observation it might be difficult to notice that feature, M. Saller, *Elephants*, pp. 60-61.
81. M. Thibout, 'L'éléphant dans la sculpture romane française', p. 192.
82. The elephant of South Lopham church somehow resembles the elephants of Vorly, but it is of the 16th century.
83. In Cambridge University Library, MS Ii. 4. 26, fol. 46v, a similar elephant has a curved beak with some undulation probably alluding to a serpent.
84. *Rostrum autem* promuscis *dicitur*, Isidore, *Etymologiae*, 12. 2. 14; Rabanus Maurus, *De rerum naturis*, 22. 8. 1.
85. *eburneo* (Rabanus). Lucretius' original passage on the other hand, meant that a whole herd of elephants made a sort of rampart of ivory, ...*videmus in genere anguimanus elephantos, India quorum milibus e multis vallo munitur eburno*..., Lucretius, *De rerum natura*, 2. v. 536-37 (trs. W. H. D. Rouse and M. F. Smith, *L. C. L.*, 1924, p. 136).
86. *The Letter of Alexander to Aristotle*, 28. *Quarum targa nigra et candida et rubri coloris et uaria quaedam erant*.
87. *Liber monstrorum*, ed. and tr. F. Porsia, Bari, Edizioni Dedalo, 1976, pp. 222-23.
88. J. Leclercq-Marx,'La couleur de la peau dans le Moyen Âge central, perception et représentation', *Revue d'Auvergne. Couleurs et lumière à l'époque romane*, 2011, p. 298.
89. *Ibid*., p. 281. Hassig cites as an example of symbolic colouring, the Oxford Bodleian Library, Bodl. 764, fol. 92v where the contrast between a white elephant and a black-and-white striped, brown dragon is evident, D. Hassig, 'The ideal spouse', p. 135. Druce too mentions the varied colouring of elephants and dragons in English manuscripts, G. C. Druce, 'The Elephant', pp. 34-36.
90. Flores points out a change in aesthetic attitude of this period quoting the word of Thomas Aquinas (1225?-74), 'Art is the imitation of nature'. N. C. Flores, 'The Mirror of Nature Distorted. The Medieval artist's Dilemma in Depicting Animals', p. 10.
91. Aristotle, *History of Animals*, 499a.
92. Albertus Magnus, *On Animals*, 20. 37 (trs. Kenneth F. Kitchell Jr. and Irven V. Resnick, *On Animals. A Medieval Summa Zoologica*, vol. I, Baltimore/London, Johns Hopkins University Press, 1999, p. 1476).
93. Pliny, *Natural History*, 8. 10. 30 (tr. H. Rackham, *L. C. L.*, III, 1983, p. 25). *Durissimum dorso tergus, ventri molle, saetarum nudum tegimentum, ne in cauda quidem praesidium abigendo taedio muscarum – namque id et tanta vastitas sentit – sed cancellata cutis et invitans id genus animalium odore; ergo cum extentis recepere examina, artatis in rugas repente cancellis conprehensas enecant, hoc iis pro cauda, iuba, villo est.*
94. *est elephas morbus qui propter flumina Nili gignitur Aegypto in media neque praeterea usquam*, Lucretius, *De rerum natura*, 6. v. 1114-1115 (trs. W. H. D. Rouse and M. F. Smith, *L. C. L.*, 1924, p. 576).
95. Pliny, *Natural History*, 26. 5. 7 (tr. W. H. S. Jones, *L. C. L.*, VII, 1956, p. 271). 'Leprosy' is the translation used by W. H. S. Jones, but we leave it as 'elephantiasis'.
96. It is uncertain whether the word elephantiasis was used to designate leprosy in the period of Cassiodorus, as the word was replaced by lepra. He may simply have been following Pliny.
97. *Cutis huius ulcerosis vallibus exaratur, a qua transportaneorum nefanda passio nomen accepit, quae in tantam duritiam solidatur, ut putes esse osseam cutem. haec nulla vi transmittitur, nullo ferri acumine penetratur, ideoque Persarum reges hanc beluam ad bella traxerunt, quae et nullis ictibus pulsata cederet et adversarios sua mole terreret*. Cassiodorus, *Variae*, 10. 3. 7. (ed. A. J. Fridh, *Magni aurelii Cassiodori. Variarum libri XII, C. C. S. L*. 96, 1973, p.

413).

98. C. Avery, 'The elephant in Italian sculpture', p. 301.
99. *Ibid*., p. 303
100. Those of Facundus (MS Vitrina 14-2, fol. 109), Valladrid (B. U. 433, fol. 73v), of Urgell (Cathedral, 26, fol. 82v), of the Morgan Library (Bk. II, viii, fol. 79).
101. The 'inhabited' tree at Otranto can be compared with Romanesque 'peopled scroll'. I have argued on the meaning of 'peopled scroll'as the 'secular world' in *Monsters in Churches* (『教会の怪物たち』),Tokyo, Kodansha, 2013, pp. 172-98.
102. Francesca Tagliatesta interprets the scene as the fourth apologue of the story of Barlaam and Josaphat (story of the tree of life). In the version diffused in Europe, derived from Greek and Latin texts, it is a unicorn that chases a man and makes him fall into a pit under the tree of life, but in the Indian, Arabic and Georgian versions, it is a furious elephant. F. Tagliatesta, 'Les représentations iconographiques du IV^{e} apologue de la légende de Barlaam et Josaphat dans le Moyen Âge italien', *Arts Asiatiques*, 64, 2009, pp. 3-26. Consequently, regarding the small animal under the large elephants at Otranto, interpretations diverge: for some it is an elephant calf, and for others one of the rodents in the fourth apologue of Barlaam and Josaphat. Cf. Chiara Settis Frugoni, 'Per una lettura del mosaico pavimentale della cattedrale di Otranto', *Bullettino istituto italiano per il medioevo e Archivio Muratoriano*, 80, 1968, pp. 220-22; F. Tagliatesta, 'Les représentations iconographiques du IV^{e} apologue de la légende de Barlaam et Josaphat dans le Moyen Âge italien', p. 10.
103. Pliny referring to many animals, writes as follows : *coitus aversis elephantis, camelis, tigribus, lyncibus, rhinoceroti, leoni, dasypodi, cuniculis, quibus aversa genitalia* (*Natural History*, 10. 83. 173). The account is narrated by Ambrose and Isidore. Pliny's scientific account that beasts that have genital organs at the rear, copulate at the rear, is often misunderstood as 'copulate back to back', and some bestiary manuscripts bear an illustration of an elephant couple standing back to back. Willen B. Clark, *A Medieval Book of Beasts*, Woodbridge, The Boydell Press, 2006, p. 121, note.14
104. Other examples are found in Sidney Sussex College, Cambridge MS 100, fols. 33v-34r, and in BL, Sloane MS 278, fol. 48v, both 13th century.
105. C. Avery, 'The elephant in Italian sculpture', p. 303. Avery supposes the reason for the use of an elephant as a support for the *cathedra* instead of the more usual lion may be found in that elephantine virtues (gentle might, equanimity and wisdom) are more assimilated with a bishop's persona.
106. In Apulia elephants are also depicted on floor mosaics at Trani cathedral. In Brindisi, Bari and Trani, many bas-reliefs and carvings of elephants decorate exteriors of churches. Their resemblance makes us suppose the existence of common models. In Campania, the church of S. Menna in Sant'Agata de' Goti and the cathedrals of Carinola and Alife have a pair of elephants as corbels of the archivolt of the portal. At the cathedral of Aversa there is a bas-relief of the 11th century imitating probably an Oriental silk textile. At the cathedral of Santa Maria a Folo Claudio, the lower part of the apse bears a curtain motif (*velum*) in a fresco depicting elephants with howdahs.

107. Anna Contadini, *A World of Beasts: A Thirteenth-Century Illustrated Arabic Book on Animals (the Kitāb Na't al-Hayawān) in the Ibn Bakhtishu Tradition*, Leiden/Boston, Brill, 2012.
108. Pliny, *Natural History*, 8. 9. 27 (tr. H. Rackham, *L.C.L*., III, 1983, p. 22). *Indicum Africi pavent nec contueri audent, nam et maior Indicis magnitudo est.*
109. Of course, a smaller animal is not necessarily afraid of a bigger one. Isidore and Rabanus relate that the elephant is afraid of mice. According to Saller, the reason for the belief that they could be frightened by small animals can be found in the fact that the Romans used pigs coated with grease and set light to them to drive away Pyrrhus's elephants. M. Saller, *Elephants*, p. 218.
110. Pliny, *Natural History*, 8. 13. 35 (tr. H. Rackham, *L. C. L*., III, 1983, p. 29), *Generet eos Aethiopia Indicis pares, vicenum cubitorum*....
111. Rabanus Maurus, *De rerum naturis*, 8. 1. *Hi boves lucas dicti ab antiquis Romanis: boves, quia nullum animal grandius videbant: lucas, quia in lucania illos primos Pyrrhus in praelio objecit Romanis*. (*P. L*. 111, 1864, col. 221)
112. Philippe de Thaün, *Bestiaire d'Amours*, 1531. *Et Ysidres nus dit ki le elefant descrit, grant sunt a desmesure e le bues unt faiture* (ed. L. Morini, *Bestiari medievali*, Torino, Giulio Einaudi editore, 1996, pp. 191-93).
113. Hassig interprets this image either on an allegorical and on a historical level, as the Church versus the Jew, or as a commentary on the fact that the Crusades were subsidised by the Jews. D. Hassig, 'The Ideal Spouse: The Elephant', p. 140.
114. On Philo's anthropocentric view of the world, see Ingvild Sælid Gilhus, *Animals, Gods and Humans: Changing Attitudes to Animals in Greek, Roman and Early Christian Ideas*, London/New York, Routledge, 2006, pp. 42-50.
115. On the other hand, Plutarch (46?-120?), almost a contemporary of Philo suggests that all animals have rational intelligence and thus they should not be treated badly. For him, hunting and fishing are cruel actions. He considers the elephant especially intelligent, as it learns tricks and is a faithful religious animal.
116. Robert Delort maintains that the scene is chosen in connection with a method of capturing elephants mentioned by Albertus Magnus after Avicenna, R. Delort, *Les animaux ont une histoire*, Éditions du Seuil, 1984, p. 364.
117. Thierry Buquet, 'Les animaux exotiques dans les ménageries médiévales', in *Fabuleuses histoires des bêtes et des hommes* (dir. Jacques Toussaint), Namur, TreM.a, 2013, pp. 121.

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'The Elephant in the Middle Ages: allegory and symbolism（西洋中世における象の寓意と象徴）', *Bulletin of Okinawa Prefectural University of Arts*, 23, 2015, *Monsters in Churches*（教会の怪物たち）, Tokyo, Kodansha, 2013, 'Il concetto di "terra" e la sua rappresentazione: un tentativo di studio comparto tra Italia e Giappone', *Atti del XXXIII convegno di studi sul Giappone*, 2009.

本学は、平成二十八年度をもって、開学三十年を迎えた。前年度のプレイヴェントから始まり、芸術の実技とその背景にある思想・歴史や理論を指導し、研究する大学にふさわしく、様々な展覧会や演奏会が催された。一方、人文学に根幹を持つ美術工芸学部の芸術学専攻、音楽学部の音楽文化専攻、リベラルアーツを担う全学教育センター、琉球・沖縄の文化を探究する附属研究所といったセクションの教員は、必ずしも実制作者、実演家ではない。では、展覧会や演奏会に対応するものは何かと問われれば、日頃の教育・研究成果を学術論文として出力することにほかならず、本論集の刊行が企図されたのである。

本来であれば平成二十八年度中に刊行されるべきであった出版物ではあるが、諸事情により完成が遅延してしまい、とりわけ速やかに原稿を送稿してくださった方々に、お詫び申し上げる次第である。しかし、開学から三十年は、あくまで大学の持続的な活動とその発展の通過点なのであり、平成二十九年度もなお、常に新鮮な精神であり続けているのであると考えていただければ、本論文集刊行の甲斐があったと安堵するものだ。各教員の背景にある様々な専門領域から、学芸の無尽蔵の広がりを感じ取っていただければ幸甚であるとともに、本書をお読みになる皆様方には、ぜひとも厳しい眼でご覧いただき、ご指導、ご鞭撻を願うものである。また、様々な要因のため、上記に該当する、教育・研究に携わる専任教員の、全員の論考を揃えることができなかったことを申し添えておく。

最後に、編集委員会を代表して、各論文執筆者、学内のすべての皆様、編集実務を担当してくださった左右社の東辻浩太郎氏に御礼申し上げる。そしてなにより、本学を温かいまなざしで応援してくださる方々、島嶼の集合体という、しばしば困難な地理的条件を担いつつ、本学を支えてくださる沖縄県民の皆様には、深い感謝を改めて示させていただきたい。混迷の二十一世紀ではあるが、この豊かな文化を持つ沖縄から、日本全国、東アジア、そして世界へ、と、伝統を引き継ぎつ、未来の芸術を開拓していく大学として、今後もさらなる発展を期するものである。（編集委員長：土屋）

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